CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Adopt Resolution Amending Traffic Resolution Approving Speed Limits on Pine Street

MEETING DATE: June 6, 2001

PREPARED BY: Public Works Director

RECOMMENDED ACTION: That the City Council adopt a resolution amending Traffic Resolution No. 97-148 by approving the speed limit modifications on portions of Pine Street as shown on Exhibit A.

BACKGROUND INFORMATION: The Public Works Department recently performed Engineering and Traffic Surveys on the following seven streets:

- Central Avenue
- Cherokee Lane
- Church Street
- Elm Street
- Hutchins Street
- Pine Street
- Tokay Street

Per Section 40802(b) of the California Vehicle Code, Engineering and Traffic Surveys must be updated a minimum of every five years on "non-local" streets. "Non-local" streets are collector and arterial streets included in the Federal Aid System. Speed limits on streets where surveys are older than five years cannot be enforced using radar.

Engineering and Traffic Surveys are performed using State of California Department of Transportation (Caltrans) guidelines. The surveys include a map showing the street and physical characteristics of the roadway, such as roadway width, number of through lanes, and traffic controls. Traffic volumes, prevailing speeds, and accidents are analyzed and the results are provided in a written narrative for each street. Accident rates, determined by the number of accidents occurring within a segment of roadway along with the traffic volume, are shown in accidents-per-million-vehicle-miles (ACC/MVM). The citywide accident rate is 4.3 ACC/MVM.

Three factors should be considered when determining the speed limit most appropriate to facilitate the orderly and reasonably safe movement of traffic: prevailing speeds, unexpected conditions to drivers, and accident records. Reasonable speeds conform to the actual behavior of the majority of motorists and, by measuring motorists' speeds, one can select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five-mile-per-hour (mph) increment below the 85th percentile speed. However, engineering judgement may indicate the need to reduce the speed limit by 5 mph.

STUDY RESULTS: Of the seven streets surveyed, staff is recommending to modify the speed limit on the following Pine Street segments:

Pine Street from Church Street to Stockton Street - This portion of Pine Street consists of three segments and is currently posted at 30 mph. The only segment long enough to survey vehicle speeds is in the two-block portion

APPROVED: _____
H. Dixon Flynn -- City Manager

from Sacramento Street to Stockton Street. The 85th percentile speeds on this segment are 29 and 31 mph. The 50th percentile speeds are 25 and 26 mph. The accident rate of 9.0 in this segment is higher than the citywide average and has increased from the 6.7 rate reported in the 1996 survey. Based solely on 85th percentile speeds, the speed limit could be set at 30 mph; however, due to the increased accident rate, we recommend reducing the speed limit from 30 to 25 mph in this segment. We also recommend reducing the speed limit in the two short blocks from Church Street to Sacramento Street. These segments are within the City's Downtown area which experiences high parking demand and turnaround, congestion, and pedestrian activity. The accident rate on all of these segments is higher than the citywide average.

Pine Street from Cherokee Lane to Beckman Road – This portion of Pine Street is currently posted at 30 mph. Since the 1996 survey, the number of accidents on this segment have increased substantially and the current accident rate of 12.1 is significantly higher than the citywide average. Based on the continuing high accident rate, we recommend reducing the speed limit to 25 mph in this segment.

Pine Street from Cluff Avenue to Guild Avenue – This portion of Pine Street is currently posted at 40 mph. Since the 1996 survey, stop signs were installed on Pine Street at Guild Avenue, which altered the segment length. The current accident rate on this segment is 3.2. Based on the 85th percentile speeds and low accident rate, we recommend reducing the speed limit in this segment from 40 to 35 mph.

RECOMMENDED ACTION: Speed limit changes are recommended on the following roadway segment:

Street Segment	Existing	Proposed
Pine Street, from Church Street to Stockton Street	30 mph	25 mph
Pine Street, from Cherokee Lane to Beckman Road	30 mph	25 mph
Pine Street, from Cluff Avenue to Guild Avenue	40 mph	35 mph

FUNDING: Funding for the modifications to speed limit signs and pavement legends from the Street Maintenance Account at an approximate cost of $1,250.

for Richard C. Prima, Jr.
Public Works Director

Prepared by Rick S. Kiriu, Senior Engineering Technician

RCP/RSK/pmf

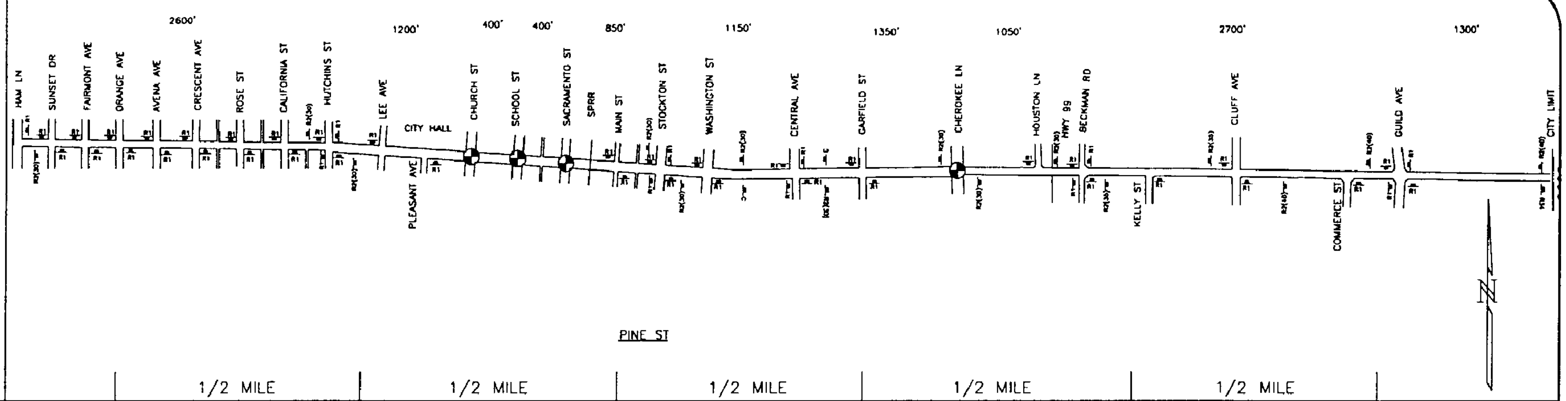
Attachment

cc: City Attorney
Police Chief
City Engineer
Street Superintendent
Associate Traffic Engineer

EXHIBIT A

ENGINEERING AND TRAFFIC SURVEY

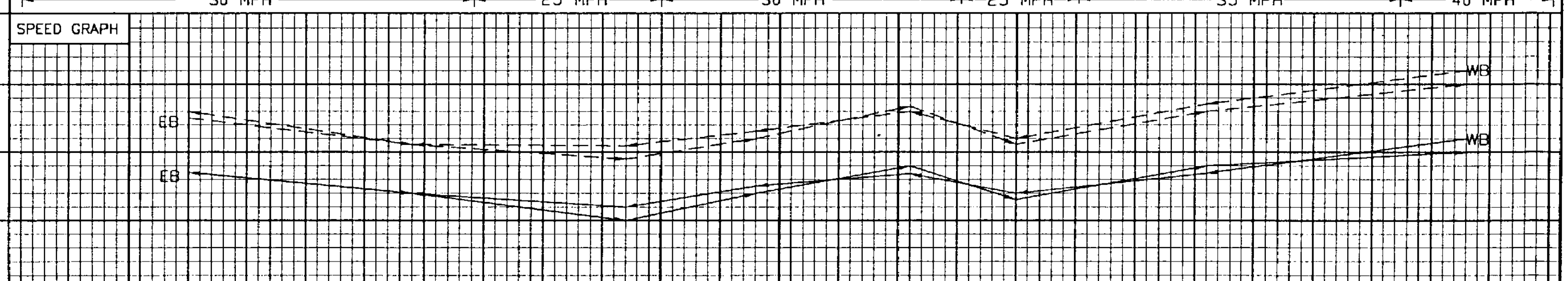
SEE NARRATIVE FOR BACKGROUND INFORMATION



SPEED TABLE										
ROADWAY WIDTH	40'	50'		56'				52'		
NO. OF LANES	2									
MEDIAN (TYPE)	NONE									
TRAFFIC SIGNAL DATA		2ØACT	2ØSEMIACT(2)				2Ø ACT			
AVERAGE DAILY TRAFFIC	2,500	3,450	(4,565)	5,680	6,050	6,640		(5,400)	4,150	1,620
OBS. SPEED-CRITICAL,85th% WB	36	31		31	33		36	32	37	42
EB	35	31		29	32		37	31	36	40
-PACE(%) WB	27-37(83)	24-34(90)		22-32(86)	25-35(88)		27-37(84)	24-34(80)	27-37(75)	32-42(66)
EB	27-37(80)	24-34(92)		20-30(85)	24-34(84)		28-38(77)	23-33(85)	28-38(81)	30-40(74)
-MEDIAN,50th% WB	32	28		26	29		32	27	32	37
EB	30	28		25	30		32	27	32	35
EXISTING SPEED ZONE	30 MPH							35 MPH		40 MPH
PROPOSED SPEED ZONE	30 MPH		25 MPH		30 MPH			25 MPH	35 MPH	40 MPH

LEGEND:

- -SIGN LOCATION
- R1 -STOP SIGN
- R2( ) -SPEED LIMIT SIGN (MPH)
- R1-2 -YIELD SIGN
- C -INSTALLATION C (SCHOOL 25 MPH SIGNS,(W65,R2(25), R72))
- -TRAFFIC SIGNAL
- -CITY LIMIT
- -CRITICAL SPEED
- -LOWER LIMIT OF PACE



ACCIDENT PLOT YR: 1999 — 1 1 | 1 | 1 | 1 1 1 | 1 | 1 | 2 1 1 1 | 7 1 1 | 2 3 1 1 1 1 | 1 1 1 1 | 3 1 1 | 0

YR: 2000 — 1 | 2 | 2 | 1 | 1 | 1 | 1 | 4 1 | 1 1 2 1 1 | 1 1 1 1 1 1 | 0 | 0

ACCIDENT RATE-ACC./MILL. VEH.-MI. — 10.0 | 7.0 | 7.9 | 7.9 | 9.0 | 14.6 | 12.1 | 12.8 | 3.2 | 0.0

DR: EKB	No.	Date	Revision	Appr	Approved By
CH:					
DATE: FEB 2001					City Engineer RCE NO. 47644 Date

CITY OF LODI

PUBLIC WORKS DEPARTMENT

PINE ST

SPEED ZONE SURVEY

May 2001

SPEED ZONE REPORT - Pine Street

- REFERENCE - Speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802 (b) of the California Vehicle Code. These guidelines are outlined in Chapter 8 of the Caltrans Traffic Manual and described below.

- STUDY CRITERIA

  Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are:

  Prevailing Speeds (85th Percentile Speeds) - Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the first five mile per hour increment below the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment may indicate the need for a further reduction of five miles per hour.

  Unexpected Conditions - When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile are warranted. The following factors were considered: roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.

  Accidents - Accident records of the two most recent years were considered in determining the speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM). The accident rate ranged from 0.0 to 14.6 ACC/MVM. The average Citywide accident rate is 4.3 ACC/MVM.

- STUDY RESULTS

  Radar Surveys
  Sixteen radar surveys were performed and the 85th percentile speeds ranged from 29 to 42 mph as shown below:

Street Segment	Eastbound	Westbound
Ham Lane to Hutchins Street	35 mph	36 mph
Hutchins Street to Church Street	31 mph	31 mph
Church Street to Stockton Street	29 mph	31 mph
Stockton Street to Central Avenue	32 mph	33 mph

Central Avenue to Cherokee Lane	37 mph	36 mph
Cherokee Lane to Beckman Road	31 mph	32 mph
Beckman Road to Guild Avenue	36 mph	37 mph
Guild Avenue to East City Limits	40 mph	42 mph

Ham Lane to Hutchins Street

The 85th percentile speeds on this segment is 35 and 36 mph. The 50th percentile speeds are 30 and 32 mph. The accident rates of 10.0 in this segment is significantly higher than the citywide average and has increased from the 7.9 rate from the 1996 survey. Based solely on 85th percentile speeds the speed limit could be set at 35 mph; however, due to the continuing high accident rate we recommend retaining the 30 mph speed limit in this segment.

Hutchins Street to Church Street

The 85th percentile speed on this segment is 31mph. The 50th percentile speed is 28 mph. The accident rate of 7.0 in this segment is higher than the citywide average and has decreased slightly from the 7.4 rate from the 1996 survey. Although the accident rate is above the citywide average, the amount is not significant. Based on these factors we recommend retaining the 30 mph speed limit in this segment.

Church Street to Stockton Street

This portion of Pine Street consists of three segments. The only segment long enough to survey vehicle speeds, is the portion from Sacramento Street to Stockton Street. The 85th percentile speeds on this segment is 29 and 31 mph. The 50th percentile speeds are 25 and 26 mph. The accident rate of 9.0 in this segment is higher than the citywide average and has increased from the 6.7 rate from the 1996 survey. Based solely on 85th percentile speeds the speed limit could be set at 30 mph; however, due to increasing accident rate we recommend reducing the speed limit from 30 to 25 mph in this segment.

We also recommend reducing the speed limit from 30 to 25 mph in the two short segments from Church Street to Sacramento Street. These segments are within the City's Downtown area which experiences high parking demand, congestion, and pedestrian activity. The accident rate of 7.9 in these segments is also higher than the citywide average.

Stockton Street to Central Avenue

The 85th percentile speeds on this segment are 32 and 33 mph. The 50th percentile speeds are 29 and 30 mph. The accident rate of 14.6 in this segment is significantly higher than the citywide average and slightly higher than the 12.4 from the 1996 survey. The great majority of accident in the segment occurred at the intersection of Washington Street. In February of this year, based on accidents, improvements were performed at the intersection consisting of larger stop signs and no parking for improved visibility. These improvements should reduce accidents, therefore lowering the accident rate. Based on the these factors, we do not recommend reducing the speed limit at this time and recommend retaining the 30 mph speed limit in this segment. We will continue to monitor the intersection at Washington Street as part of our annual citywide review.

Central Avenue to Cherokee Lane
The 85th percentile speeds on this segment are 36 and 37 mph. The 50th percentile speed is 32 mph. The accident rate of 12.1 in this segment is significantly higher than the citywide average but basically unchanged from the 12.4 rate from the 1996 survey. Based solely on the 85th percentile speeds the limit could be set at 35 mph; however, due to the continuing high accident rate, we recommend retaining the 30 mph speed limit in this segment.

Cherokee Lane to Beckman Road
The 85th percentile speeds on this segment are 31and 32 mph. The 50th percentile speed is 27 mph. The accident rate of 12.8 in this segment is significantly higher than the citywide average and has increased from the 9.6 rate from the 1996 survey. Based solely on the 85th percentile speeds the limit could be set at 30 mph; however, due to the increasing accident rate, we recommend reducing the speed limit to 25 mph in this segment.

Beckman Road to Guild Avenue
Since the previous survey, stop signs have been installed on Pine Street at Guild Avenue. The 85th percentile speeds on this segment are 36 and 37 mph. The 50th percentile speed is 32 mph. The accident rates of 3.2 in this segment is below the citywide average. Based on 85th percentile speeds and low accident rate, we recommend a 35 mph speed limit in this segment.

Guild Avenue to East City Limits
The 85th percentile speeds on this segment are 40 and 42 mph. The 50th percentile speeds are 35 and 37 mph. There have been no accidents occurring in this segment. Based on the 85th percentile speeds and absence of accidents, we recommend retaining the 40 mph speed limit in this segment.

- CONCLUSION

The recommended speed limits are shown below:

SEGMENT	POSTED SPEED LIMIT
Ham Lane to Hutchins Street	30 mph (no change)
Hutchins Street to Church Street	30 mph (no change)
Church Street to Stockton Street	30 to 25 mph
Stockton Street to Cherokee Lane	30 mph (no change)
Cherokee Lane to Beckman Road	30 to 25 mph
Beckman Road to Guild Avenue	40 to 35 mph (Cluff to Guild)
Guild Avenue to East City Limits	40 mph (no change)

F. Wally Sandelin
City Engineer

Pine1_

RESOLUTION NO. 2001-148

A RESOLUTION OF THE LODI CITY COUNCIL APPROVING SPEED LIMIT MODIFICATIONS ON PINE STREET, AND THEREBY AMENDING TRAFFIC RESOLUTION NO. 97-148

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WHEREAS, speed zone surveys are performed in the City of Lodi following State of California Department of Transportation (Caltrans) guidelines in accordance with Section 40802(b) of the California Vehicle Code, which are outlined in Chapter 8 of the Caltrans Traffic Manual; and

WHEREAS, per §40802(b) of the California Vehicle Code, Engineering and Traffic Surveys must be updated a minimum of every five years on "non-local" streets. "Non-local" streets are collector and arterial streets included in the Federal Aid System, and speed limits on streets where surveys are older than five years cannot be enforced using radar; and

WHEREAS, the Public Works Department recently performed Engineering and Traffic Surveys on the following streets: Central Avenue, Cherokee Lane, Church Street, Elm Street, Hutchins Street, Pine Street, and Tokay Street; and

WHEREAS, of the seven streets surveyed, staff recommends modifying the speed limit on the following Pine Street segments:

Street Segment	Existing	Proposed
Pine Street, from Church Street to Stockton Street	30 mph	25 mph
Pine Street, from Cherokee Lane to Beckman Road	30 mph	25 mph
Pine Street, from Cluff Avenue to Guild Avenue	40 mph	35 mph

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Lodi does hereby approve the speed limit modifications on portions of Pine Street as shown above; and

BE IT FURTHER RESOLVED, that the City of Lodi Traffic Resolution No. 97-148, Section 7 "Speed Limits" is hereby amended by designating speed limit modifications as shown above.

Dated: June 6, 2001

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I hereby certify that Resolution No. 2001-148 was passed and adopted by the City Council of the City of Lodi in a regular meeting held June 6, 2001, by the following vote:

AYES: COUNCIL MEMBERS – Hitchcock, Howard, Land, Pennino and Mayor Nakanishi

NOES: COUNCIL MEMBERS – None

ABSENT: COUNCIL MEMBERS – None

ABSTAIN: COUNCIL MEMBERS – None

Susan J. Blackston

SUSAN J. BLACKSTON
City Clerk